

REMARKS

Upon entry of the Amendment, claims 1-8 are all the claims pending in the application. Claims 5-8 have been withdrawn from consideration. Claim 4 has been canceled. Claim 1 has been amended by incorporating the subject matter of canceled claim 4. Therefore, no new matter has been added.

I. Elections/Restrictions

Restriction to one of the following groups have been required under 35 U.S.C. § 121:

Claims 1-4, drawn to a semiconductor device

Claims 5-8, drawn to a method of manufacturing a semiconductor device

Referring to page 2-3 of the Office Action, the Examiner has constructively elected claims 1-4.

Applicants respectfully traverse. Applicants respectfully submit that the examination of both claims 1-4 and claims 5-8 together will not place an undue burden on the Examiner's search.

II. Claim Rejections - 35 U.S.C. § 102(e)

Claims 1-3 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Published Application No. 2003/0006407 to Taylor ("Taylor '407'").

Without admitting that the rejection is correct, Applicants have amended claim 1 by incorporating the subject matter of claim 4 into claim 1. Canceled claim 4 was not rejected under 35 U.S.C. § 102(e). In this regard, Taylor '407 fails to describe or suggest the compound semiconductor epitaxial substrate presently recited in amended claim 1.

III. Claim Rejections - 35 U.S.C. § 103

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Taylor '407 in view of U.S. Patent No. 5,449,928 to Matsugatami *et al.* ("Matsugatami '928").

Applicants respectfully traverse.

Taylor '407 discloses a compound semiconductor substrate device in which the substrate is GaAs and the electron supplying layer is AlGaAs. Referring to page 4 of the Office Action, the Examiner asserts that Taylor '407 is deficient in that it fails to teach an InGaAs layer that has an electron mobility at 300 K of $8300 \text{ cm}^2/\text{V}\cdot\text{s}$. Matsugatami '928 is relied upon to alleviate this deficiency. Matsugatami '928 discloses that when InGaAs spacer layer 4 has a thickness of 0 nm, the mobility is $11500 \text{ cm}^2/\text{V}\cdot\text{s}$. *See*, col. 6, lines 17-38. Referring to Figure 2 of Matsugatami '928, Matsugatami '928 discloses that the compound semiconductor device thereof has InP as the substrate and InAlAs as the electron supplying layer. *See* col. 5, lines 23-52.

A person of ordinary skill in the art would not have been motivated to make the proposed modification in the compound semiconductor substrate disclosed in Taylor '407. The substrate and the electron supplying layer disclosed in Taylor '407 are different from the substrate and electron supplying layer disclosed in Matsugatami '928. Further, Taylor '407 fails to suggest modifying the compound semiconductor substrate device thereof so that the substrate is InP and the electron supplying layer is InAlAs. Similarly, Matsugatami '928 fail to suggest modifying the compound semiconductor substrate thereof so that the substrate is GaAs and the electron supplying layer is AlGaAs. In this regard, a person of ordinary skill in the art would not have been motivated to combine Taylor '407 with Matsugatami '928.

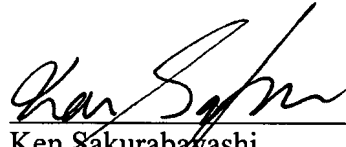
AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No.: 10/540,514

Docket No: Q88664

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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